

DELIVERING GENETIC MATERIAL TO A STIMULATION SITE

ABSTRACT

Delivery of genetic material to a stimulation site causes transgene expression by tissue at the stimulation site. In some embodiments, the delivered genetic material causes increased expression of proteins, such as connexins, gap junctions, and ion channels, to increase the conductivity of the tissue at the stimulation site. In some embodiments, the delivered genetic material causes expression of a metalloproteinase, an anti-inflammatory agent, or an immunosuppressant agent. Genetic material is delivered to the stimulation site via a stimulation lead. A stimulation lead for delivering genetic material to a stimulation site includes a chamber that contains a polymeric matrix. The matrix absorbs the genetic material and elutes the genetic material to the stimulation site.